IN THE CLAIMS

Claim 1. (Currently Amended) A hail resistant roof system comprising:

a roof deck;

an insulation layer supported by said roof deck, wherein said insulation layer is more compressible and resilient than said roof deck;

a frangible energy absorbing layer supported by said insulation layer, wherein said energy absorbing layer is of a different material than said insulation layer; and

a waterproof membrane loose laid over said frangible energy absorbing layer, such that said waterproof membrane is completely unattached to any portion of the roof system at any area of said waterproof membrane running substantially parallel to a relatively upper surface of said frangible energy absorbing layer, said waterproof membrane only being attached to the roof system at an area of the waterproof membrane running substantially perpendicular to said relatively upper surface of said frangible energy absorbing layer;

at least one intentional wrinkle disposed over an open area of said relatively upper surface of said frangible energy absorbing layer that is absent any attachment structure, adhesive, or other structure protruding upwardly from said relatively upper surface of said frangible energy absorbing layer relative to a substantial remainder of said relatively upper surface of said frangible energy absorbing layer, said open area between said waterproof membrane and said relatively upper surface of said frangible energy absorbing layer at said wrinkle allowing said waterproof membrane to be pulled down towards said relatively upper surface of said frangible energy absorbing layer in response to hail impact upon the waterproof membrane without interference from any attaching to said relatively upper surface of said frangible energy absorbing layer or structure between said waterproof membrane and said relatively upper surface of said frangible energy absorbing layer.

Claim 2. (Original) A hail resistant roof system as claimed in Claim 1 wherein said energy absorbing layer is gypsum board.

Claim 3. (Original) A hail resistant roof system as claimed in Claim 2 wherein said gypsum board is ½ inch thick.

Claim 4. (Original) A hail resistant roof system as claimed in Claim 1 wherein said membrane is fiberglass reinforced.

Claim 5. (Original) A hail resistant roof system as claimed in Claim 1 wherein said membrane is about 80 mil fiberglass reinforced or thicker.

Claim 6. (Original) A hail resistant roof system as claimed in Claim 1 wherein joints in said insulation layer are offset from joints in said energy absorbing layer.

Claim 7. (Original) A hail resistant roof system as claimed in Claim 1 wherein said insulation is of a resilient material.

Claim 8. (Original) A hail resistant roof system as claimed in Claim 7 wherein said resilient material is about 1.5 inches thick or more.

Claim 9. (Original) A hail resistant roof system as claimed in Claim 1 wherein said deck or substrate is air sealed.

Claim 10. (Original) A hail resistant roof system as claimed in Claim 1 wherein said membrane is air sealed to a wall structure.

Claim 11. (Cancelled)

Claim 12. (Original) A hail resistant roof system as claimed in Claim 11 wherein said at least one wrinkle is located within a field of said membrane.

Claim 13. (Currently Amended) A hail resistant roof system as claimed in Claim 11 wherein said at least one wrinkle is a folding back of said waterproof membrane upon itself, and is located at a perimeter edge of said roof deck.

Claim 14. (Cancelled)

Claim 15. (Currently Amended) A hail resistant roof system as claimed in Claim 11 wherein said at least one wrinkle is located at both a field of said membrane and perimeter edge of said roof deck, wherein said wrinkle at said perimeter edge is a folding back of said waterproof membrane upon itself.

Claim 16. (Cancelled)

Claim 17. (Previously Presented) A wind blown debris resistant roof system comprising:

a roof deck;

a layer of stiff material attached to said roof deck;

a primary waterproofing membrane supported by said stiff material; and

a roof insulation layer that is more compressible and resilient than said roof deck, and a frangible energy adsorbing layer loose laid over the primary water proofing membrane, wherein said energy absorbing layer is of a different material than said insulation layer; and

a secondary waterproofing membrane disposed over the frangible energy adsorbing layer.

Claim 18. (Currently Amended) A hail resistant roof system comprising:

a roof deck or air sealed substrate;

a primary waterproofing membrane disposed over at least a substantial portion of said roof deck or air seal substrate;

an insulation layer loose laid over primary waterproofing membrane;

an energy absorbing layer supported by said insulation layer, wherein said energy absorbing layer is of a different material than said insulation layer; and

a secondary waterproof membrane loose laid over said energy absorbing layer, such that said waterproof membrane is completely unattached to any portion of the roof system at any area of said waterproof membrane running substantially parallel to a relatively upper surface of said frangible energy absorbing layer, said waterproof membrane only being attached to the roof system at an area of the waterproof membrane running substantially perpendicular to said relatively upper surface of said frangible energy absorbing layer;

at least one intentional wrinkle disposed over an open area of said relatively upper surface of said frangible energy absorbing layer that is absent any attachment structure, adhesive, or other structure protruding upwardly from said relatively upper surface of said frangible energy absorbing layer relative to a substantial remainder of said relatively upper surface of said frangible energy absorbing layer, said open area between said waterproof membrane and said relatively upper surface of said frangible energy absorbing layer at said wrinkle allowing said waterproof membrane to be pulled down towards said relatively upper surface of said frangible energy absorbing layer in response to hail impact upon the waterproof membrane without interference from any attaching to said relatively upper surface of said frangible energy absorbing layer or structure between said waterproof membrane and said relatively upper surface of said frangible energy absorbing layer.

Claim 19. (Original) A hail resistant roof system as claimed in Claim 18 wherein said energy absorbing layer is gypsum board.

Claim 20. (Original) A hail resistant roof system as claimed in Claim 18 wherein joints in said insulation layer are offset from joints in said energy absorbing layer.

Claim 21. (Original) A hail resistant roof system as claimed in Claim 18 wherein said insulation is of a resilient material.

Claim 22. (Original) A hail resistant roof system as claimed in Claim 1 wherein said deck is air sealed.

Claim 23. (Original) A hail resistant roof system as claimed in Claim 1 wherein said membrane is air sealed to a wall structure.

Claim 24. (Cancelled)

Claim 25. (Original) A hail resistant roof system as claimed in Claim 24 wherein said at least one wrinkle is located within a field of said membrane.

Claim 26. (Currently Amended) A hail resistant roof system as claimed in Claim 24 wherein said at least one wrinkle is a folding back of said waterproof membrane upon itself, and is located at a perimeter edge of said roof deck.

Claim 27. (Cancelled)

Claim 28. (Currently Amended) A hail resistant roof system as claimed in Claim 24 wherein said at least one wrinkle is located at both a field of said membrane and perimeter edge of said roof deck, wherein said wrinkle at said perimeter edge is a folding back of said waterproof membrane upon itself.

Claim 29. (Cancelled)

Claim 30. (Original) A hail resistant roof system as claimed in Claim 1 further comprising a preexisting roof assembly that is air sealed underlying at least the energy absorbing layer.

Claim 31 (Currently Amended) A hail resistant roof system comprising:

a roof deck;

a resilient roof insulation layer disposed upon said roof deck, wherein said insulation layer is at least one of expanded polystyrene (EPS) and polyisocyanurate foam (ISO);

at least .5 inches of gypsum board disposed upon said insulation layer, wherein the insulation layer is configured to compress to allow energy absorption when the gypsum is struck by an object; and

a loose laid, non-reinforced waterproofing membrane with fabricated wrinkles disposed upon said gypsum board, such that said waterproof membrane is completely unattached to any portion of the roof system at any area of said waterproof membrane running substantially parallel to a relatively upper surface of said gypsum board, said waterproof membrane only being attached to the roof system at an area of the waterproof membrane running substantially perpendicular to said relatively upper surface of said gypsum board,

wherein said wrinkles are disposed over an open area of said relatively upper surface of said gypsum board that is absent any attachment structure, adhesive, or other structure protruding upwardly from said relatively upper surface of said gypsum board relative to a substantial remainder of said relatively upper surface of said gypsum board, said open area between said waterproof membrane and said relatively upper surface of said gypsum board at said wrinkle allowing said waterproof membrane to be pulled down towards said relatively upper surface of said gypsum board in response to hail impact upon the waterproof membrane without interference from any attaching to said relatively upper surface of said gypsum board or structure between said waterproof membrane and said relatively upper surface of said gypsum board.